

XVII.—*On the Collection of Lepidoptera formed by Basil Thomson, Esq., in the Louisiade Archipelago.* By W. F. KIRBY, F.E.S., Assistant in Zoological Department, British Museum (Natural History).

THE collection of Lepidoptera entrusted to me for examination includes forty-one specimens, belonging to twenty-one species, of which two only are moths. Among the butterflies I found eight species which appear to be new and which are described below. So far as can be seen from so small a selection, the affinities of the species are mainly Papuan, especially with those previously received from Port Moresby. Several of the species also exhibit strong Moluccan and Australian affinities, while others show a relationship to the insects of Kei, Aru, New Georgia, and other islands lying east or west of the Louisiades. There are not more than one or two species, such as *Eurema hecabe* and *Leptosoma integrum*, which exhibit any special relationship to the Indo-Malayan fauna. Perhaps the most interesting of the novelties obtained by Mr. Thomson are the species of *Tenaris*, belonging to a genus of butterflies which obtains its maximum of development in the Papuan Islands. That so large a proportion of novelties as eight conspicuous butterflies out of a total of nineteen were collected during a flying visit to one or two islands sufficiently indicates the richness of the fauna of the Louisiades and the desirability of its being more systematically investigated.

RHOPALOCERA.

Nymphalidæ.

DANAINE.

LIMNAINA.

Genus ASTHIPA.

Asthipa, Moore, Proc. Zool. Soc. Lond. 1883, p. 246.

1. *Asthipa Schenkii*.

Danais Schenkii, Koch, Indo-Austr. Lep.-Fauna, p. 107 (1865).

Danais gloriola, ♀ var., Butl. Proc. Zool. Soc. Lond. 1866, p. 57.

“Rossel Island, Oct. 18, 1888.” A pair, male and female.

This is a larger and paler species than *A. gloriola*, Butl.

(=*citrina*, Feld.), from Aru; but it would need a good series of both to ascertain their comparative differences with precision. Koch's type was from the island of New Georgia, and there is a specimen of the female in the British Museum from Kei Island which hardly differs from Mr. Thomson's except in being a little yellower at the base. It is this which Mr. Butler formerly described as a variety of his *Danais gloriola*. Felder appears to have confounded the two, as he states that it occurs both in Kei and Aru, though his description and figures correspond with Butler's *gloriola* from the latter locality.

Genus SALATURA.

Salatura, Moore, Lep. Ceylon, i. p. 5 (1880); Proc. Zool. Soc. Lond. 1883, p. 239.

2. *Salatura affinis*.

Papilio affinis, Fabr. Syst. Ent. p. 511 (1775).

"Sudest Island, Oct. 18, 1888 [two specimens]; Normunby Island, Oct. 30, 1888."

A common species in all parts of Australia; it is likewise in the British Museum from Aru and Kei, and Moore records it from Ceram and Amboina.

EUPLÆINA.

Genus HAMADRYAS.

Hamadryas, Boisd. Voy. Astr., Lép. p. 91 (1832).

3. *Hamadryas niveipicta*.

Hamadryas niveipicta, Butl. Ann. & Mag. Nat. Hist. (5) xiii. p. 191 (1884).

"Normunby, Oct. 30, 1888." One specimen.

In the British Museum from North Ceram, Kei, and Kei Dulan (type).

Genus PENOA.

Penoa, Moore, Proc. Zool. Soc. Lond. 1883, p. 244.

4. *Penoa Thomsoni*, sp. n.

Exp. al. 70 millim.

Male.—Dark brown; costa of the hind wings paler; a

submarginal row of large suffused white spots, only divided by the nervures, running across both wings, those nearest the costa of the fore wings longest and furthest from the hind margin.

Underside similar, but rather paler; a small pale blue spot before the end of the cell, followed beyond the cell by a row of three spots on the fore wings and five on the hind wings; the first of the three on the fore wings is a small streak, and the third is a long white streak, tapering outwards to a point.

Body and extreme base of wings spotted with white.

“St. Aignan, Oct. 21, 1888; Normunby, Oct. 30, 1888.”

Two specimens from the former locality and one from the latter. A very distinct species, with but little resemblance to any previously described species allied to *Euplœa*.

Genus CALLIPLÆA.

Calliplœa, Butl. Trans. Ent. Soc. Lond. 1875, p. 1; Moore, Proc. Zool. Soc. Lond. 1883, p. 292.

5. *Calliplœa Jamesi*.

Calliplœa Jamesi, Butl. Proc. Zool. Soc. Lond. 1876, p. 766, pl. lxxvii. fig. 2.

“Normunby, Oct. 30, 1888.” One specimen.

A rather variable species. The present specimen has five white spots on the fore wings and three white dots on the hind wings, and beneath, in addition, a white dot just above the discocellular nervule, and a submarginal row of white dots, which, on the hind wings, do not extend to the tip.

There are four specimens in the British Museum, two (the types) from Port Moresby, New Guinea, and two from New Guinea without further specification of locality. None of these agree exactly in spotting with Mr. Thomson's specimen, though the correctness of the identification is hardly doubtful.

Genus SALPINX.

Salpinx, Hübn. Verz. bek. Schmett. p. 17 (1816); Moore, Proc. Zool. Soc. Lond. 1883, p. 300.

6. *Salpinx eustachius*, sp. n.

Exp. al. 69–71 millim.

Male.—Rich tawny brown, hardly paler except towards the margins of the posterior wings; a large buff sexual mark

extending over the upper half of the cell of the latter, as in the allied species. Anterior wings with a bluish-white spot, obsolete above, in the middle of the costa, and a submarginal row of seven white spots, the first three largest and approximating; an oval bluish-white spot below the first branch of the median nervure. Posterior wings with two white submarginal dots (sometimes nearly obsolete) below the tip.

Underside: anterior wings with the submarginal spots nearly as above, but opposite to the last is a larger and slightly bluish-white spot nearer the base; beneath this, on a large buff patch covering the inner margin of the wing, is an oval black ring occupying the position of the bluish-white spot of the upper surface. Posterior wings with one or two white dots close to the base, and a submarginal row of more or less distinct white dots.

“Rossel Island, Oct. 18, 1888.”

Three specimens obtained.

Closely allied to *S. grueffiana*, Heer, from the Fiji Islands, in the arrangement of its spots; but the latter species has the hind margin paler and the costal spot (which is entirely absent in one specimen of *S. eustachius*) more distinct above. In colour *S. eustachius* more resembles *S. oculatus*, Moore, from Mindanao.

Genus STICTOPLÆA.

Stictoplæa, Butl. Journ. Linn. Soc., Zool. xiv. p. 301 (1878); Moore, Proc. Zool. Soc. Lond. 1883, p. 319.

7. *Stictoplæa Macgregori*, sp. n.

Exp. al. 72 millim.

Female.—Rich velvety black; hind wings browner, especially towards the costa and inner margin, the latter slightly inclining to red. Anterior wings with a submarginal row of eight white dots of irregular shape, the second the largest, the fourth very minute, and the seventh and eighth approximate. Posterior wings with a submarginal row of eleven white spots (the first obsolete above), increasing in size to the seventh, at first round and then oval, the seventh and ninth the longest.

Underside paler; anterior wings with the small fourth dot obsolete; posterior wings with small pale bluish dots, one before the end of the cell, one in the first fork of the subcostal, and another in the upper fork of the median nervure; a submarginal row of eleven white spots as above, but the second, third, eighth (sometimes), and ninth with a smaller

spot obliquely beyond, nearer the hind margin, that beneath the ninth spot only separated from it by a constriction.

Body black, spotted with white; anal appendages tawny.

"Normunby Island, Oct. 18, 1888." One specimen.

Allied to *S. palla*, Butl., from Aru, which appears from the description to be identical with *S. papuana*, Reak.

SATYRINÆ.

Genus MYCALESIS.

Mycalesis, Hübn. Verz. bek. Schmett. p. 54 (1816?).

8. *Mycalesis flagrans*.

Mycalesis flagrans, Butl. Ann. & Mag. Nat. Hist. [4] xviii. p. 243 (1876).

"Rossel Island, Nov. [Oct. ?] 18, 1888."

A single worn specimen. The type was received from Port Moresby.

MORPHINÆ.

Genus TENARIS.

Tenaris, Hübn. Verz. bek. Schmett. p. 52 (1816?).

Drusilla, Swains. Zool. Ill. i. pl. xi. (1820).

9. *Tenaris Kirschi*.

Drusilla Kirschi, Staud. Exot. Schmett. p. 199. n. 16 (1887).

"Normunby Island, Oct. 30, 1888."

Two males. This species is new to the British-Museum collection. It was described by Staudinger from Port Moresby, South-west New Guinea. It is allied to *T. dioptrica*, Voll.

10. *Tenaris fimbriata*, sp. n.

Exp. al. 90 millim.

Female.—White; fore wings with the costa and apex, as far as the lowest branch of the median nervure, dark brown; hind wings with the costa, apex, and hind margin nearly to the anal angle dark brown, the upper ocellus with the small pale pupil and large yellowish ring faintly defined on the dark colour of that portion of the wing; the lower ocellus not visible above.

Underside similar; the ocelli of the hind wings well-marked, black, slightly speckled with blue, and with a small

white ocellus and a yellow ring. The upper ocellus is placed on the dark border near the edge of the ring; the lower one is placed well within the dark border and is surrounded by a brown outer ring.

Head and antennæ black; thorax grey, with a black stripe on each side and a broader and shorter one in the middle in front; pectus and legs brown, the proboscis and tarsi inclining to reddish; palpi and abdomen bright yellow, the palpi blackish above.

“Normunby Island, Oct. 30, 1888.”

Allied to *T. catops*, originally described by Prof. Westwood from a specimen from New Ireland, in Boisduval's collection. The only specimen in the British Museum agreeing with the description of *T. catops* is a female from Port Moresby, from which *T. fimbriata* differs in the broader marginal markings, the lower ocellus, which is nearly as large as the upper one, though much smaller in *T. catops*, and, what is probably of much greater consequence, the absence of any yellow colouring towards the inner margin of the hind wings.

11. *Tenaris barbata*.

Exp. al. 83 millim.

Male.—Pure white; fore wings with the inner margin convex beyond the base, the costa and apex narrowly and evenly edged with black, ceasing at the extremity of the first discocellular nervule; hind wings narrowly dusted with blackish at the tip as far as the second subcostal nervule, and again from the anal angle halfway along the inner margin, the upper ocellus showing indistinctly through, but the black, blue-dusted lower ocellus with its white pupil well marked, though the outer rings are less distinct; at the base is a large brush of reddish-brown hair, and the hair between the median and first submedian nervures is yellow for a third of the length of the wing and white beyond; the hair between the first and second submedian nervures, parallel to the dusky stripe on the inner margin, is also reddish brown.

Underside: fore wings as above; hind wings with the whole of the base from the costa to the inner margin yellow, slightly interrupted at the base of the cell; ocelli of moderate size, black, with inner crescents of blue dusting, and white pupils; the concentric rings are yellow and brown; the upper ocellus is so close to the tip of the wing that the costa cuts off half the upper edge of the outer brown ring; the lower ocellus is placed near but well within the hind margin.

Head, legs, pectus, and front of thorax above dark brown; thorax grey, with a dusky median stripe, including a short black one in front; head behind the antennæ, palpi, and abdomen yellow; palpi blackish on each side above.

“Rossel Island, Oct. 18, 1888.”

A single male. This insect may be the male of *T. Jamesi*, Butl., described from a single female without further locality than New Guinea; but in this specimen the yellow is widely extended at the base of both pairs of wings above and less so below, and the outer half of the inner margin of the fore wings is blackish, instead of that of the hind wings. It is much to be regretted that insects of the genus *Tenaris* are often received singly, for it is impossible without large series from the same locality to be certain whether the numerous closely allied forms are really distinct or not, and we have therefore no alternative but to describe them provisionally as species.

12. *Tenaris affinis*, sp. n.

Exp. al. 93 millim.

Male.—Extremely similar to the last species, but the base of the fore wings is slaty grey, extending from the base nearly to the end of the cell, conterminous with the dark costa, and then crossing the median nervure, and covering the whole of the wing between its lowest branch and the submedian, and likewise the hinder angle, leaving only the inner margin white, beneath the submedian nervure, which runs white through the dusky portion of the wing to its extremity; on the hind wings the costa and hind margin are moderately broadly blackish to below the upper branch of the median nervure; the lower ocellus is larger and the outer rings on the underside are wider and darker. On the underside the yellow hair at the base is only visible between the median nervure and the inner margin, for the whole base of the fore wings and of the costa of the hind wings (for the costal edging is narrower between the base and the ocellus) is black.

The thorax is darker grey than in *T. barbata*, without black markings, and the palpi are black above.

“Rossel Island, Oct. 18, 1888.”

If the single specimen had been a female I should certainly have regarded it as the female of the last. It has, however, more resemblance to *T. onesimus*, Butl., in some respects.

ACRÆINÆ.

Genus ACRÆA.

Acræa, Fabr. Illiger's Mag. vi. p. 284 (1807).

13. *Acræa ænone*, sp. n.

Exp. al. 50-51 millim.

Male and Female.—Fore wings semitransparent grey, darker along the margins and especially at the tip, with a black spot at the base of the cell and transverse black spots in its middle and at its extremity. Beyond the cell is a row of three smaller more or less confluent spots, and there are two more between the branches of the median nervure near their origin; there are also two larger spots between the median and submedian nervures, one near the base and the other above the middle of the inner margin, and a row of indistinct sagittate spots between the nervures on the hind margin. Hind wings black, with a submarginal series of eight oblong buff spots, divided by the nervures, those nearest the anal angle emarginate on the inside. The spot nearest the costa is linear and considerably produced inwards; below its inner edge descends a row of three smaller spots, divided by the nervures, and within this is another large irregular spot; in the black border is a row of obsolete tawny spots, more distinct as they approach the anal angle.

Underside similar, but on the hind wings the submarginal tawny spots are much more distinct, and there are several cream-coloured spots in the dark basal portion of the wings, which are only indistinctly indicated on the upper surface.

Body black; the palpi, two round spots on the prothorax above, a double row of spots on the sides of the abdomen, and transverse stripes beneath buff. Pouch of the female reddish.

“Eust Island, Oct. 24, 1888” (one specimen); “St. Aignan, Oct. 21, 1888” (two specimens).

Allied to the Australian *A. andromache*, Fabr.; but the latter species is larger and the buff colour extends over the whole hind wing except at the extreme base and hind margin, being divided in the middle by a single or Y-shaped row of confluent black spots.

Lycænidæ.

Genus THYSONOTIS.

Thysonotis, Hübn. Verz. bek. Schmett. p. 20 (1816).

Danis, Westw. Gen. Diurn. Lep. p. 497 (1852).

14. *Thysonotis regina*, sp. n.

Exp. al. 42-45 lin.

Male.—Wings rather broad, subdentate; costa of fore

wings strongly arched. Fore wings sky-blue, costa and hind margin bordered with black, fringes white, spotted with black at the ends of the nervures, a comparatively narrow white band, divided by the nervures, running from the inner margin to above the median nervure. Hind wings pale blue at the base, followed by a white band continuous with that on the fore wings; the outer half of the wing is black, the upper portion being filled up with blue from the white band nearly to the hind margin. Fringes white, spotted with black on the nervures.

Underside black, sometimes paler towards the margins; the white bands on the wings as above, but more sharply defined on the fore wings and continuous, a blue stripe divided by the nervures intersects the dark costal portion of the wing and curves downwards on the hind margin, where it is more macular, as far as the lowest branch of the median nervure; on the hind wings the black basal part is intersected by an oblique blue stripe, and there is another along the basal part of the inner margin; on the wide black border is a row of large oval black spots surrounded with blue.

Head white, a spot between the antennæ (which are black, spotted with white beneath) and hinder orbits pale blue; a black stripe runs from the frontal blue spot to the palpi, which are black beneath and at the tips; thorax black or brown, clothed above with shaggy white hair; legs black, tarsi narrowly spotted with white; abdomen black above, ringed with blue, and more or less blue towards the base; beneath white.

Female.—Blackish brown, with a white band, as in the male, but that on the fore wings is wider, better defined, and divided by the branches of the median nervure; that on the hind wings is narrower, so that the black border covers two thirds of the wing. The hind margin of the fore wings is more convex than in the male. The under surface differs little, but the blue submarginal band on the fore wings descends nearly to the submedian nervure.

Six males and one female taken at Normunby on Oct. 30, 1888.

Size of *T. sebae*, Westw., but the male more resembles *T. danis*, Cram., in its markings and the female has the fore wings more convex and the hind wings more widely bordered with black. The under surface in both sexes is of a less greenish blue.

Papilionidæ.

PIERINÆ.

Genus EUREMA.

Eurema, Hübn. Verz. bek. Schmett. p. 96 (1818?).

Terias, Swains. Zool. Ill. i. pl. xxii. (1821).

15. *Eurema hecabe*.

Papilio hecabe, Linn. Syst. Nat. ed. x. i. p. 470. n. 74 (1758).

Two specimens, not differing appreciably from Indian ones, taken on Eust Island, Oct. 24, 1888; a third without locality.

Genus APPIAS.

Appias, Hübn. Verz. bek. Schmett. p. 91 (1818?); Butl. Cist. Ent. i. p. 49 (1869).

16. *Appias cilla*.

Pieris cilla, Feld. Reise d. Novara, Lep. ii. p. 165. n. 139 (1865).

"Normunby Island, Oct. 30, 1888."

One male, not differing from a specimen from Aru in the British Museum.

Genus BELENOIS.

Belenois, Hübn. Verz. bek. Schmett. p. 92 (1818?); Butl. Cist. Ent. i. p. 50 (1869).

17. *Belenois niseia*.

Pieris niseia, Macl. King's Surv. Austr. ii. p. 459. n. 138 (1827).

"Sudest Island, Oct. 24, 1888."

Four specimens of this common Australian insect, three males and one female. Two of the males and the female are unusually small, and the female, which expands only 41 millim., belongs to a variety (?) hitherto unrepresented in the British-Museum collection; but it cannot safely be regarded as a distinct species in a group where the males are fairly constant and the females extremely variable. The fore wings are pale to beyond the cell; but the costa, a line above the basal half of the submedian nervure, a very large oblong blotch conterminous with the costa, covering the end of the cell, and the apical third and hind margin are dark brown. The base is stained with orange as far as the level

of the black blotch which closes the cell, and the rest of the wing within the border, and a row of about six submarginal spots, of which the second and third are the largest, are white. Hind wings with the apical half and all the nervures broadly black; the cell is filled up nearly to the extremity with pale sulphur-yellow; the costa is of the same colour, faintly marked with orange, and within the fork of the median nervure is a large pale spot followed by three smaller ones and then by longer ones, the two nearest the inner margin extending to the anal angle. There is a submarginal row of orange spots, partly bordered with white, and the base below the cell and the inner margin are likewise marked with orange.

Underside similar, but the orange at the base of the fore wings is more intense and the pale markings on the hind wings are smaller, better defined, and therefore wholly macular. There is an orange mark at the base of the costa, and on the whole the underside hardly differs from that of ordinary females of *B. niseia*.

PAPILIONINÆ.

Genus PAPILIO.

Papilio, Linn. Syst. Nat. ed. x. i. p. 458 (1758); Doubl. Ill. Diurn. Lep. p. 5 (1846).

18. *Papilio pandion*.

Papilio pandion, Wall. Trans. Linn. Soc. Lond. xxv. p. 56 (1865).

Normunby Island, Oct. 30, 1888.

A single female, closely resembling Wallace's figure of *P. ormenus*, Guér. ♀ (*l. c.* pl. iii. fig. 3), but with light orange instead of red spots on the hind wings. It stands in the British-Museum collection as the female of *P. pandion*.

19. *Papilio ulysses*.

Papilio ulysses, Linn. Syst. Nat. ed. x. i. p. 459. n. 4 (1758).

A rather small male, without special locality attached.

HETEROCERA.

BOMBYCES.

Nyctemeridæ.

Genus LEPTOSOMA.

Leptosoma, Boisd. Voy. Astr., Lép. p. 197 (1832).

20. *Leptosoma integrum*.

Nyctemera integra, Walk. Cat. Lep. Het. B. M. xxxv. p. 1879 (1866).

“ Rossel Island, Oct. 18, 1888.”

In the British Museum from the Philippines and Ternate.

GEOMETRÆ.

Euschemidæ.

GENUS CELERENA.

Celerena, Walk. Trans. Ent. Soc. Lond. (3) i. p. 71 (1862).

21. *Celerena vulgaris*.

Celerena vulgaris, Butl. Proc. Zool. Soc. Lond. 1876, p. 768.

“ Normunby Island, Oct. 30, 1888.” Two specimens.

In the collection of the British Museum from Port Moresby. I much doubt whether this insect is distinct from *C. perithea*, Cram., which is found in Amboina, as the width of the markings appears to be a variable character.

XVIII.—*Description of a new Stenodermatous Bat from Trinidad*. By OLDFIELD THOMAS.

MR. H. CARACCIOLA, of Trinidad, has recently sent to the British Museum some few bats which appeared to him to be of unusual occurrence there. Among these there is a specimen belonging to the genus *Vampyrops*, but representing a very striking new species, for which I propose the name

Vampyrops Caracciola.

Size rather less than in *V. vittatus*, Peters. Markings unusually conspicuous, the white lines, both facial and dorsal, brighter and more prominent than in any other species of the genus. General colour a uniform soft greyish brown both above and below, rather paler over the shoulders. Supra-orbital white stripes broad, nearly touching one another anteriorly, and running from just behind the nose-leaf to the posterior corner of the ear; dorsal stripe commencing on the occiput, expanding between the shoulders, and continued